File NR G2-30523
WR Doc ID 4636290

DEPARTMENT OF ECOLOGY
State of Washington

State of Washington
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

PRIORITY DATE	WATER RIGHT NUMBER
6/22/2009	G2-30523

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
QUALITY ROCK PRODUCTS INC 10201 LITTLEROCK RD SW OLYMPIA WA 98512	Same

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
50	GPM	50

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE ADDITIVE	WITHDRAWAL OR DIVERSION RATE NON-ADDITIVE	UNITS	ANNUAL QUANTITY (AF/YR) ADDITIVE	ANNUAL QUANTITY (AF/YR) NON-ADDITIVE	PERIOD OF USE (mm/dd)
Mining	50		GPM	50		01/01 - 12/31

REMARKS

This water right includes Water Budget Neutral/Mitigation In-Kind. Quality Rock Products has acquired a consumptive water right to offset effects on the Black and Chehalis Rivers. Quality Rock Products will acquire and voluntarily relinquish 70 afy to enhance instream flow. Relinquishment will occur within 60 days of the final report of examination or prior to formal permit decision (pending any appeal).

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
0	0		

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
THURSTON	GROUNDWATER		23-UPPER CHEHALIS

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
A Well			17N	02W	18	SW		

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

12718310000, 13713440000, 13724110000, 13724140000

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

SW1/4 of Sec. 18, T.17N, R.2W, Thurston County Parcel No. 12718310000
SE1/4 of Sec. 13, T.17N, R3W, Thurston County Parcel No. 13713440000
NE 1/4 of NE1/4, Sec. 24, T.17N, R.3W, Thurston County Parcel No. 13724110000
SE1/4 of NE1/4, Sec. 24, T.17N, R.3W, Thurston County Parcel No. 13724140000

Proposed Works

Proposed well will be constructed within the TQu aquifer. Pumped groundwater is directed to onsite retention ponds as make up water. Some pumped water will be used for dust control.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
September 1, 2013	September 1, 2014	September 1, 2018

Additional Actions and Due Dates

ACTION	DATE DUE

Relinquishment of the acquired 70 acre-feet shall be executed within 60 days of the final Report of Examination or prior to issuance of the formal permit decision (pending any appeal).

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Annually (Jan 31)
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

Mitigation

The use of water under this permit is subject to acquiring 70 afy of consumptive water use currently held under ground water Change Decisions CG2-GWC2469 and CG2-21863 and returning the water back to the State in the form of voluntary relinquishment. The applicant would consumptively use 50 afy and there will be an additional 20 afy that will contribute to instream flow enhancement.

This mitigation is contingent upon QRP drilling a new production well to withdraw water from the TQu aquifer. The existing shallow (exempt) well cannot be used for gravel washing purposes.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

Measurements, Monitoring, Metering and Reporting
An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Southwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Southwest Regional Office for forms to submit your water use data.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Water Use Efficiency
The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Proof of Appropriation
The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Findings of Facts
Upon reviewing the investigators report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. G2-30523, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW Ste 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Signed at Olympia, Washington, this 7th day of August 2012.

Michael J. Gallagher

Michael J. Gallagher, Section Manager

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov. To find laws and agency rules visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser.

Investigators Report

BACKGROUND

On June 22, 2009, Quality Rock Products filed an Application for a Water Right Permit (G2-30523) with the Washington State Department of Ecology (Ecology) to appropriate public groundwater for mining and commercial-industrial operations. The applicant requested authorization for an instantaneous withdrawal rate (QI) of 50 gallons per minute (gpm) and a total annual withdrawal volume (QA) of 50 acre-feet per year (afy) from two wells.

Planned use of the appropriation is for mining, including but not limited to dust control, truck washing and gravel washing.

Priority Processing

This application is being priority processed because it qualified under the criteria under which an application may be processed prior to competing applications (WAC 173-152): *Applicant proposes a Water Budget Neutral/Mitigation project to offset their consumptive effects on the Black River by acquiring 70 afy of consumptive water use held under ground water change decisions CG2-GWC2469 and CG2-21863 and retuning back to the State 70 afy of water though voluntary relinquishment.* The applicant would consumptively use 50 afy and there will be an additional 20 afy that will contribute to instream flow enhancement. No diminishment of the source would occur with this mitigation proposal.

Description and Purpose of Proposed Application

Table 1 Application Summary

Attributes	Summary
Name	Quality Rock Products Inc
Priority Date	6/22/2009
Instantaneous Quantity	50 gpm
Annual Quantity	50 af/yr
Purpose of Use	MI
Period of Use	Year around as needed
Place of Use	Parcels: 12718310000, 13713440000, 13724110000, 1372414000

Table 2 Proposed Sources of Withdrawal or Diversion

Source Name	Parcel	WellTag	Twn	Rng	Sec	QQ Q	Latitude	Longitude
A well	12718310000		17N	02W	18	SW		

Legal Requirements for Approval of Appropriation of Water

The following requirements must be met prior to authorizing the proposed water right:

Public Notice

RCW 90.03.280 requires that notice of a water right application by published one a week, for two consecutive weeks, in a newspaper of general circulation in the area where the water is to be stored, diverted and used. Notice of this application was published in the Olympian during the weeks of May 2nd and May 9th, 2011.

In response to public notice of this application, the Department of Ecology received a letter of protest on June 7, 2011 from M. Patrick Williams on behalf of the Black Hills Audubon Society (BHAS). This protest will be addressed later in this report.

State Environmental Policy Act (SEPA)

The subject application is categorically exempt under SEPA (WAC 197-11-305 and WAC 197-11-800(4) because the instantaneous quantity is less than the 2,250 gpm threshold.

Water Resources Statutes

RCWs 90.03 and 90.44 authorize the appropriation of public water for beneficial use and describes the process for obtaining water rights. Laws governing the water right permitting process are contained in RCW 90.03.250 through 90.03.340 and RCW 90.44.050. In accordance with RCW 90.03.290, determinations must be made on the following four criteria in order for an application for water rights to be approved:

- Water must be available
- There must be no impairment of existing rights
- The water use must be beneficial
- The water use must not be detrimental to the public interest

This report serves as the written findings of fact concerning the investigation regarding Water Right Application Number G2-30523.

Investigation

In consideration of this application, Ecology reviewed available documents pertaining to the application's site conditions, water demand, the potential effects on the surface water bodies, and the potential effect on existing water right holders and established minimum instream flows. This review included information submitted by the applicant, Quality Rock Products hydrogeology consultant reports and proposed mitigation strategy, along with pertinent Ecology records, including well log reports, water right records and watershed planning information for the Chehalis River Basin.

Several meetings with the applicant have occurred since 2009 to discuss mitigation proposals, existing water use, on site well(s), and the effects of withdrawals to existing water rights including the Black River and nearby surface waters. Two site visits have been conducted with Quality Rock Products representatives to determine the existing well location, view the onsite surface water settling retention ponds, and to discuss current water uses and future water demands.

Location

The project site is an existing aggregate mine and washing facility located in southern Thurston County situated about 3 miles southwest of Tumwater and approximately one mile west of Littlerock Road, within the Chehalis River Basin (Water Resource Inventory Area 23).

On Site Conditions

The site contains two buildings and an aggregate wash plant served by an existing well. The plant recycles much of the water. Turbid water is collected and pumped through a series of lined settling ponds and then back to the initial holding pond to complete the cycle. Ground water is pumped to the extent that makeup water is needed to recharge the holding pond. Smaller amounts of water are pumped from the well for on-site dust suppression. Water from the existing on site well will continue to be used for the office building for domestic uses. Mined areas will eventually be reclaimed to forest land and wildlife habitat.

Project Description

Quality Rock Products seeks authorization to withdraw groundwater from two wells, one existing and one proposed, for the purpose of gravel mining.

Regional Geology

The project site lies in the southern part of Thurston County, where both Tertiary bedrock and Pleistocene glacial deposits occur at the surface. North of the site lies the Puget Sound Lowland, which is underlain by alternating glacial and non-glacial deposits of the Pleistocene Epoch. A few miles south of the site is a eroded upland of Tertiary rocks (bedrock) and the southern extent of glaciations.

The thickness of glacial sediments beneath the site exceeds 95 feet (deepest on-site well) and may be up to 300 feet thick, Drost and others (1998; 1999) summarized the geologic history of the area and identified several aquifers and aquitards, including from shallowest to deepest:

Vashon Recessional Outwash Aquifer **(Qvr)**

Recessional outwash deposits (Qvr) are sediments that were deposited by meltwater streams discharging from the most recent glacier as it retreated northward from the south Puget Sound area. Qvr deposited sediments are the youngest geological deposits in the area (with the exception of alluvial sands and gravels found in local streambeds).

Qvr sediments are composed primarily of sand and gravel. Wells logs for the area indicate a thickness to range between 0-30 feet thick.

Vashon Till aquitard **(Qvt)**

Underlying the Qvr is the Qvt or till layer. The Qvt is a mixture of compacted clays and silts, with unsorted sands, gravels, cobbles and boulders that was picked up and transported by the glacier as it advanced into the area and was deposited over the Qva. Drillers often refer to these deposits as "hardpan". The Qvt deposits confines the groundwater in the deeper Qva layer.

The Qvt unit is found at depth throughout the area with a thickness that generally ranges from 0 to 60 feet. The Qvt unit is considered a confining layer and its cemented conditions limit its water transmitting capacity.

Vashon Advance Outwash aquifer **(Qva)**

The advance outwash deposits (Qva) lie beneath and are confined by the overlying Qvt till. The Qva sediments were carried and deposited by meltwater streams discharging from the glacier as it advance southward over the area during the most recent glaciation. The Qva is a permeable aquifer unit and consists generally of gravel in a matrix of sand with some sand lenses. The Qva is widespread throughout the subsurface ranging in thickness between 0 – 50 feet, and is the primary source for single domestic water supplies in the area.

The Qva Unit, consisting of layered slightly silty, sandy gravel or slightly silty, gravelly sand is the primary source of aggregate for the mine.

Kitsap Formation aquitard **(Qf)**

The Kitsap Formation (Qf) is a low-permeability, fine-grained confining layer that separates the overlying Qva unit from the deeper Qc and TQu units. The Qf unit is composed of predominantly clay and silt, with some local layers of sand and gravel, and may include some till or till-like deposits and minor amounts of peat and wood. The Qf unit is present throughout the area and ranges in thickness between 5 to 20 feet.

Salmon Springs Drift/penultimate glacial deposits aquifer **(Qc)**

The Salmon Springs Drift lies beneath the Kitsap Formation. This unit consists of primarily coarse-grained sand and gravel and is generally characterized by oxidized red or brown staining (iron-oxides). This unit is referred to as the Salmon Springs Drift by Noble and Wallace (1966) because the stratigraphic relationships mapped in the Thurston County area are similar to the Salmons Springs Drift type-section mapped in Pierce County. The Qc unit is present throughout the area and ranges in thickness from between 15 – 30 feet. Groundwater in the Qc unit is confined by the overlying Qf unit.

Unconsolidated and undifferentiated sediments, with the uppermost unit an aquitard **(Tqu)**

Underneath the Qc unit is a layering of unconsolidated and undifferentiated deposits known as the TQu Unit. This unit consists of glacial and non-glacial sediments of clay, silt sand and gravel and is known to consist of layers of fine-grained confining beds and coarse-grained aquifer units (Drost et al., 1999). The TQu unit is widespread throughout the region, but based on area well logs, do not occur south of the Littlerock area. The thickness of the aquitard portion of the Tqu Unit ranges from 50 – 60 feet and the thickness of the aquifer (water-bearing) portion of this Unit ranges from 0 – 50 feet thick. The TQu is the target aquifer for Quality Rock Products proposed well.

Volcanic and sedimentary bedrock (**Tb**)

The deepest hydrogeologic unit in the area is the consolidated bedrock, identified as the Tb Unit. This bedrock unit consists of sedimentary claystone, siltstone and sandstone and igneous bodies of andesite and basalt. The Tb unit is known to contain some water in fractures and joints, but is considered to be an unreliable source of water due to low yields and poor water quality (Drost et al., 1999).

At Quality Rock Products Littlerock Pit, units Qvr and Qvt have mostly been stripped off in the mined area; however, Ashley Creek and associated wetlands bordering the north side of the mine are hydraulically perched on the Qvt unit. The till was found to contain 49% silt and clay. Till also caps the undisturbed upland areas.

Units Qf, Qc, TQu and Tb lie at unknown depths at the mine but are presumed to be present based on the stratigraphic interpretation by Drost and others (1999).

Groundwater Flow Direction

The presence of the Black River valley generally controls groundwater flow direction in the area, with the exception that groundwater flow in the Qvr aquifer tends to be toward the nearest stream.

In the Qva aquifer, groundwater flows generally towards the Black River, but with a southwesterly component in the down-valley direction of the Black River valley.

Groundwater flow in the intermediate Qc aquifer exhibits similar flow patterns as the overlying Qva aquifer, but the effect of local surface water drainages is less.

The groundwater flow direction in the TQu aquifer is unknown in the QRP area. However, based on regional groundwater-flow model, the flow direction is likely to be approximately the same as in the Qc aquifer.

Potential Effects on Surface Water Rights and Instream Flows

The existing gravel mine lies within the Upper Chehalis River Basin. The shallow groundwater at the mine site flows toward the Black River in the Qvr (Vashon Recessional Outwash) aquifer which is tributary to the Chehalis River. Capture of stream discharge (streamflow) refers to the process whereby pumping a well causes less groundwater discharge to a stream or causes surface water to flow into the aquifer. Both types of capture reduce streamflow. Withdrawals from different aquifers will capture at different rates from a particular river. Withdrawals from the deeper aquifers generally capture from longer reaches of a river than withdrawals from shallower aquifers.

The proposed well will pump water from the deepest confined aquifer (Tqu) and will capture some groundwater that would ultimately discharge to the Black and Chehalis Rivers. The withdrawn groundwater will be put to beneficial use for various gravel mining related operations such as gravel washing and dust control. From these onsite activities, the water is discharged to the onsite holding pond where it will either be reused for gravel washing, will discharge to the upper (Qvr) aquifer, or will be lost to evaporation.

Instream Flows

Minimum flows were established by Chapter 173-522 WAC for the Chehalis River Basin, WRIAs 22 and 23. Streamflow data for the upper Chehalis River watershed have indicated a trend of declining annual mean flows in many of the watershed's streams (Wildrick and others, 1995). Review of discharge records for the Chehalis River at Porter (station gage 12.0310.00) indicate that between 1953 and 1991, instream flows were not met an average of 73 days per year, particularly during May, June and July, as well as sometimes during other months. This gage includes tributary inflow from the Black River. Analysis of data for the Porter gage (Envirovision, 2000) indicates that the combination of minimum instream flow and allocated water rights (both surface water and groundwater) is greater than the gaged 50% exceedence flow of the Chehalis River (median flow) from April through October.

The Black River is closed from July 1 through September 30. Instream flows by rule are set for the non closure period. Closure indicates water is not available for additional consumptive use (without mitigation).

Potential Effects on Groundwater Rights

The withdrawal of 50 afy will result in a very small long term decline of the groundwater level in the area. Pacific Groundwater Group (2011) used the Thurston County Groundwater Model to estimate that the drawdown will less than one foot in the wells nearest to the site. The nearest wells are domestic exempt wells situated along 88th Avenue Southwest. These domestic wells are completed in the shallower aquifer (Qva) which is separated from the deepest aquifer (TQu) by an aquitard (unit F). Therefore nearby wells will not be impaired.

Water Right Records

In an approximately one-mile radius of the proposed point of withdrawal for this application there are 11 Water Right Certificates, 2 Water Right Permits and 30 Water Right Claims. This number was determined by conducting a search of Ecology's Water Rights Database for Sections 18 and 19 in T17N, R2W, WM and Sections 13 and 24 in T17N, R3W, WM. A vast majority of these water rights are for stock watering, irrigation and either multiple domestic, general domestic or single domestic purposes.

Additionally, a search of the Ecology Well Log Database shows there are at least 82 water wells in Sections 18 and 19 in T17N, R2W, WM and Sections 13 and 24 in T17N, R3W, WM. These wells range from 9 to 137 feet in depth with a vast majority of the water wells in the 50 – 90 foot depth range.

The largest certificated use in this area is for an instantaneous diversion (Qi) of 2.5 cfs (1125 gpm) for the purpose of fish propagation. This surface water right certificate (2861) has a priority date of November 6, 1944. Fish propagation is considered a non-consumptive use of water.

The largest consumptive use within a one-mile radius of the Quality Rock Products location is for an instantaneous withdrawal (Qi) of 120 gpm, with an annual withdrawal (Qa) of 24 afy.

Mitigation

Quality Rock Product's (QRP) proposed well will capture groundwater from the TQu (Deep Aquifer). The TQu aquifer is the deepest known aquifer in the area and is the fourth major aquifer, situated below the Qc (Salmon Springs), Qva (Vashon Advance) and Qvr (Vashon Recessional) aquifers. Much of the 50 afy to be withdrawn from the proposed well under this application request will return to the Qvr Aquifer as return flow from gravel-washing activities. However, to be conservative in estimating potential hydrologic effects, the modeling assessment assumed that the 50 afy of pumpage will be fully consumptive, such that none of the water would return to the aquifer or streams. The model-calculated impacts of the consumptive use will be 15.5 gallons per minute of streamflow capture from the Black River from its headwaters to its mouth. QRP proposes to offset this capture effect by acquiring 70 afy of consumptive water use from Ground Water Right Changes CG2-GWC 2469 and CG2-21863 and then contributing 20 afy to instream flow enhancement.

Ground water rights 2469-A and G2-21863 were historically exercised as irrigation of the Weiks Brother Evergreen Dairy located about ½ mile north of the Town of Littlerock off of 123rd Avenue and Endicott Road SW. This property and Dairy were owned and operated by the Weiks Family for approximately 80 years. Later the property was used and operated by The Evergreen Dairy for manure disposal and hay production. Operations included pasture and other feed-crop management, care and milking of the dairy herd and processing and packaging of the milk products. The dairy herd was managed as a closed herd, with an average of about 700 head and then declining to about 200 head in the mid 1990's. The dairy farm consisted of about 293 acres and the majority of the food for the dairy herd was grown on about 185 acres.

These water rights were changed in 2000 to become municipal/multiple domestic rights for the Littlerock Water System. In November 2000 Ecology evaluated the two certificates and determined that a total of 480 gpm and 84 afy of consumptive water use were in good standing and eligible to be changed. These water rights are currently in good standing subject to a development schedule that extends until September 1, 2015.

In order to calculate the hydrologic effects of the proposed withdrawal, Pacific Groundwater Group (2011) used the Thurston County Groundwater Model in its original form, as developed by the U. S. Geological Survey in 1999. A summary of the model's calculations related to the proposed withdrawal are shown in Table 1, below.

Table 1. Simulated Streamflow Capture Rates for Wells at Weiks Dairy and QRP Littlerock Mine

Simulated Stream Capture Conditions	Weiks Dairy Capture, Pumping Rate = 52 gpm		QRP Capture, Pumping Rate = 31 gpm		Net Increase in Streamflow (Weiks Dairy - QRP)	
	CFS	GPM	CFS	GPM	CFS	GPM
Current Conditions (Weiks Dairy pumping from Dairy Well #2 in TQu aquifer)						
Black River and Tributaries, Upstream of Weiks Dairy	0.04	16.6	0.02	11.1	0.01	5.5
Black River and Tributaries, Downstream of Weiks Dairy	0.07	29.5	0.01	4.4	0.06	25.1
Total	0.10	46.1	0.03	15.5	0.07	30.6
Prior Conditions (Weiks Dairy pumping from Keller Well in Qva aquifer)						
Black River and Tributaries, Upstream of Weiks Dairy	0.04	17.9	0.02	11.1	0.02	6.9
Black River and Tributaries, Downstream of Weiks Dairy	0.07	32.4	0.01	4.4	0.06	28.0
Total	0.11	50.4	0.03	15.5	0.08	34.9
gpm = gallons-per-minute						
cfs = cubic-feet-per-second						

The table shows that there will be a net increase in streamflow in the Black River, both upstream to Black Lake and downstream of the Weiks Dairy to the Chehalis River, when withdrawals are moved from their initial locaton at the Dairy to QRP's proposed well site. Streamflow rates will increase by an average of approximately 25 gpm downstream of the Weiks Dairy and by more than 5 gpm upstream of the dairy. This is partly because the pumping at QRP will withdraw from a deeper aquifer than one of the wells at the Weiks Dairy. The increase in streamflow will occur because the total average rate of pumping will decrease from 34.9 gpm (equivalent to 70 ac-ft/yr) to 30.6 gpm (equivalent to 50 ac-ft/yr). This combination of changes are reflected in the calculations of the multi-aquifer model. The current Littlerock water rights (2469-A and G2-21863) will retain 14 afy (Qa) and 70 afy (Qa) of these two water rights will relinquish instead of Littlerock growing into the entire 84 afy (Qa). Water right 2469 (Qa of 37.5 afy) will be completely relinquished to the state and water right G2-21863) (Qa of 46.5 afy) will be partially relinquished to the state and the remainerder will be retained by Littlerock Water System. Therefore, QRP's proposed use will be fully mitigated and the Black River's flow will be increased at the Littlerock area and also at the QRP mine area.

The water code provides that Ecology can consider "resource-management techniques" when making water availability determinations or considering whether effects of diversion or withdrawals can be offset (RCW 90.44.055). The proposed mitigation will, in effect, change a relatively localized capture effect on the Black River, reduce the effect, relocate a portion of the effect down-stream and benefit summer lowflows during the most critical period for instream habitat.

Ecology has reviewed the area hydrogeology, hydrogeology reports, the mitigation proposal and Chehalis River Basin watershed planning recommendations. No impairment will occur as a result of the mitigation proposal to relinquish 70 acre-feet of water which will enhance stream flows in the Black River. As provisioned, voluntary relinquishment of 70 afy out of a total of 84 afy from water rights 2469-A and G2-21863 will occur within 60 days of the final water right examination decision or prior to the issuance of the formal permit (pending any appeal).

This mitigation is contingent upon QRP drilling a new production well to withdraw water from the TQu aquifer. The existing shallow (exempt) well cannot be used for gravel washing purposes.

Consideration of the Protest

The BHAS is concerned that the proposed withdrawal of ground water would have a detrimental effect on the Black River and that any additional withdrawals from the river or aquifer(s) that discharge to it cannot be allowed.

In consideration of this protest, Ecology has investigated and weighed these concerns regarding the potential impacts of the proposed pumping of ground water at the QRP gravel mine on the Black and Chehalis Rivers. The mitigation proposed in this report addresses these concerns. The BHAS also expressed concern regarding cancelled surface water permit number S2-25375 and that the cancelled permit might be used to offset effects of pumping from the QRP wells. Ecology is not considering this cancelled surface water permit for mitigation of this proposed use.

Watershed Planning

Quality Rock Products site is located within Water Resources Inventory Area 23 which has been in active planning for over a decade. The Chehalis Watershed plan was adopted in May 2004 with phase 4 implementation work starting in October 2005. Ecology's goal for this watershed is that water right decisions in Thurston County be consistent with the watershed planning process.

A key recommendation of the Watershed Plan is that the state make it clear to water right applicant's that they consider using flexible strategies to meet their water needs, given that hydraulic continuity is an issue. The planning group's recommendation is that Ecology develop standards for mitigation methods.

Quality Rock Product's mitigation proposal for the Littlerock site water is consistent with the Watershed Plan as it provides the applicant to be able to operate without reducing instream flows. With this in-kind mitigation proposal, a net gain will occur within the Black and Chehalis Rivers.

Beneficial Use

The use of water for Mining, Industrial and Commercial purposes is defined in statute as a beneficial use (RCW 90.54.020(1)).

Public Interest Considerations

In consideration of this request, the mitigation as proposed, of retiring a 70 afy water right will serve as a net benefit to the Black and Chehalis Rivers by offsetting the pumping of 50 afy at the QRP gravel mine.

Conclusions

- Water is physically available and, due to the proposed mitigation, is legally available.
- Due to the proposed mitigation, this use will not impair existing water rights.
- The proposed use is a beneficial use.
- The water use will not be detrimental to the public interest.

Reccommendations

Based on the above investigation and conclusions, I recommend that this application be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

50 gpm
50 acre-feet per year

For the purposes of mining, industrial and commercial operations to include but not limited to dust control, truck washing and gravel washing.

Point of Withdrawal:

SW¼, Section 18, Township 17 North, Range 2 W.W.M., Thurston County, Washington

Place of Use:

As described on Page 1 of this Report of Examination.

Vicki Cline 8/7/2012

Vicki Cline Report Writer *Date*

If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Selected References

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